

ABSTRACT

An impeller for use in a centrifugal pump, the impeller including a shroud having opposed faces, an outer peripheral edge portion and a rotation axis, a plurality of pumping vanes on one of the faces of the shroud and extending away from the rotation axis, each pumping vane having an outer peripheral edge portion, and a plurality of auxiliary vanes on the other face of the shroud, the auxiliary vanes of each having an outer edge portion wherein the dimension Da from the rotation axis to the outer peripheral edge portion of the shroud is greater than the dimension Db from the rotation axis to the outer edge portion of the auxiliary vanes.